REMARKS

Reconsideration of the above-identified patent application in view of the amendments above and the remarks following is respectfully requested.

Claims 1-10 are in this case. Claims 1 and 9 have been rejected under § 112, second paragraph. Claims 1-10 have been rejected under § 103(a). Independent claim 1 and dependent claims 7 and 9 have been amended.

The claims before the Examiner are directed toward a method of facilitating the handoff of a mobile unit from one base station of a wireless communication system to another base station of the system. The old base station sends to at least one candidate new base station information about the connection with the mobile unit. The information includes a rough TOD (time-of-day) and a device address of the mobile unit. The mobile unit does not participate in the sending of the information. Each candidate base station receives the information, generates a list of frequencies at which the mobile unit is likely to transmit, and checks for a signal transmitted by the mobile unit.

§ 112, Second Paragraph Rejections

The Examiner has rejected claims 1 and 9 under § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, with regard to claim 1, the Examiner has pointed out that the preamble of claim 1 states "a method of detecting the presence of a specific mobile unit", but the "specific" mobile unit is not referred to in the body of the claim. With regard to claim 9, the Examiner has pointed out that the term "the Switch" lacks antecedent basis.

Claim 1 now has been amended to clarify that the mobile unit discussed in the body of the claim is in fact the "specific" mobile unit defined in the preamble. Claim 7, the only dependent claim that also recites the mobile unit, has been amended similarly. In addition, for stylistic clarity, the preamble has been amended to state that the wireless communication system comprises a Base Station connected with "at least one" mobile unit (one of which is the "specific" mobile unit).

Claim 9 now has been amended by the deletion of the term "the Switch". Support for this amendment is found in Figures 9A-9C that show base stations 123 and 124, and no Switch, connected via LAN 140.

§ 103(a) Rejections – Haartsen '332 in view of Haartsen '446

The Examiner has rejected claims 1-10 under § 103(a) as being unpatentable over Haartsen, US Patent No. 6,009,332 (henceforth, "Haartsen '332") in view of Haartsen, US Patent No. 6,490,446 (henceforth, "Haartsen '446"). The Examiner's rejection is respectfully traversed.

Haartsen '332 teaches a method of operating a local, private radio communication system that uses the same frequencies as a cellular network within which the private system is located. The private system includes a base station **20** and a mobile terminal **26**. Base station **20** first selects a set of candidate frequencies to use, based on long-term monitoring of the activity of the cellular network. Before actually communicating, base station **20** performs short-term monitoring of local activity at the candidate frequencies to determine the actual frequency to use.

Haartsen '332 is almost silent on the subject of the handoff of terminal **26** from one base station **20** to another base station **20**. Essentially all that Haartsen '332 says on this subject is column 6 lines 32-34:

> ...conventional communications and handoff protocols may be used with the present invention, and need not be described further herein.

The Examiner has cited column 10 lines 42-46 of Haartsen '332 as teaching a handoff of terminal **26** from one base station **20** to another base station **20**. Column 10 lines 42-46 of Haartsen '332 teach no such thing. Instead, column 10 lines 42-46 of Haartsen '332 are part of a paragraph (column 10 lines 31-54) that teaches "handing off" terminal **26** from one frequency to another frequency while communicating with the same base station **20**. The purpose of this "handoff" is defined in column 10 lines 34-36:

> If the link becomes unacceptable, a handover to another, better FH link can be initiated by the private base station **20**.

Indeed, the very first words ("During the connection" of the paragraph in column 10 lines 31-54 show that this "handoff" has nothing whatsoever to do with handing off terminal **26** from one base station **20** to another base station **20**.

Thus, Haartsen '332 has absolutely nothing to do with the present invention, which is directed at the transfer of information, about a communication session between a mobile unit and a base station, from that base station <u>to neighboring base stations</u> to facilitate a handoff of the mobile unit to one of the neighboring base stations.

Haartsen '446 teaches an uncoordinated frequency hopping cellular system in which mobile terminals manage their own handoffs among the base stations, as illustrated in Figure 8 and as described in column 7 lines 45-62. The paragraph in column 7 line 63 through column 8 line 12 then teaches that

> ...the handover procedures can be accelerated if a base station to which the terminal connects not only reveals information regarding its own status, but that of surrounding stations as well.

Normally, the information is gathered by one or more of the terminals and then sent to all the base stations, as described in column 8 lines 30-34; but the information could also be gathered and exchanged "via the wired backbone that connects the base stations" (column 8 line 14).

However, unlike the present invention, the information shared by the base stations of Haartsen '446 relates exclusively to the base stations themselves. Absent from this information is anything specific to a communication session between a base station and a particular mobile terminal.

By contrast, according to the present invention, a Base Station that is in communication with a mobile unit manages that communication using an instance of a low-level protocol that is specific to a particular communication session with that mobile unit. The Base Station also shares that instance with other Base Stations to which the mobile unit may be handed off. This is described, for example, on page 29 lines 2-5:

> For each connection of a Base Station with a handset, there is a separate instance of the low-level protocol running at a Base Station connected to the handset...These instances are created, on an as-needed basis, when a connection is initiated. (emphasis added)

and on page 28 lines 24-28 in connection with Figure 8B:

> The Base Station 123 will handle the communication with the handset 133, by creating a copy 281' of the instance 281 of the low-level protocol, that previously ran on Base Station 124. This allows handset 133 to continue communication without "knowing" that a changeover of Base Stations has occurred.

What enables one Base Station to create a copy of a low-level protocol initially running on another Base Station is that the other Base Station sends the protocol parameters to the first Base Station via LAN 140, as described on page 30 lines 7-13, in connection with Figure 9A:

> The "current" Base Station" 123 sends call parameters and rough synchronization information over the LAN 140 to the neighboring Base Stations, a one of which is shown as Base Station #2 124. In this manner, the neighboring Base Stations "know" that they are "candidate" Base Stations for receiving a handoff of the call from the current Base Station. The information which is broadcast by the current Base Station to the candidate next Base Stations includes low-level communications protocol states and parameters...

Among these low-level communications protocol parameters are device address (Table 2, page 35, first table entry) and rough TOD (Table 2, page 36, second table entry).

Note that the mobile unit is not involved in the transfer of parameters, from one Base Station to another, that enables the receiving Base Station to create its local copy of the communication session's low-level protocol. This is stated on page 43 lines 3-5:

> ...the handsets do not actively participate in the handoff operations. Therefore, the Base Stations will determine which handsets are in their coverage range...

and on page 48 lines 8-10:

> The two techniques for detecting a handset, described immediately hereinabove, are "passive" in the sense that they do not require any actions to be taken by the handset, other than the initial action of being engaged in a call (connected to a Base Station). (emphasis added)

This is in contrast with Haartsen '446, in which the mobile terminals are actively involved in the handoffs. For example, in the handoff illustrated in Figure 8, mobile terminal MS1 must send control packet **811** to base station BS2. Given that the entire thrust of Haartsen '446 is towards the active participation of the mobile terminals in the management of the cellular system, it is not at all obvious from Haartsen '446 that information relating to a specific communication session between a specific mobile terminal and a base station could be transferred from that base station to another base station during a handoff without the active involvement of the mobile terminal.

While continuing to traverse the Examiner's rejections, Applicant has, in order to expedite the prosecution, chosen to amend independent claim 1 in order to clarify and emphasize the crucial distinctions between the present invention and the teachings of Haartsen '446. Specifically, claim 1 has been amended to clarify that the information about the connection with the mobile unit is provided by the Base Station to the at least one neighboring Base Station independently of the specific mobile unit. Support for this amendment is found in the above citations from page 43 lines 3-5 and page 48 lines 8-10.

Amended independent claim 1 now features language which makes it absolutely clear that the method of the present invention includes sending information, about a connection between a Base Station and a mobile unit, from that Base Station to one or more neighboring Base Stations independently of the mobile unit. Applicant believes that the amendment of the claims completely overcomes the Examiner's rejections on § 103(a) grounds.

With independent claim 1 in condition for allowance in its present form, it follows that claims 2-10, that depend therefrom, also are in condition for allowance.

In view of the above amendments and remarks it is respectfully submitted that independent claim 1, and hence dependent claims 2-10 are in condition for allowance. Prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,

Mark M. Friedman
Attorney for Applicant
Registration No. 33,883

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